Washing-apparatus.—The actual washing arrangement always takes the form of a fine shower or overhead spray of pleasantly heated water from a rose about 7 in. in diameter, placed 7 ft. or 8 ft. above the floor. Under such a shower the dirtiest man can easily and comfortably, with the aid of a piece of soap, make himself quite clean within ten minutes. The advantages of this form of bath in comparison with others are manifest. It affords a rapid, effective, and pleasant method of washing all over, and the water falling on the floor is at once conducted away by a simple system of drainage; as the pipes and rose are overhead they occupy no floor-space and comparatively little room. The bathing-place can also be cleaned up readily with a douche from a hose.

Consumption of Water.—The amount of water required for each bather is comparatively small. Mr. Kuss states that for collieries in Belgium it averages 6½ gallons per man per bath. The figures given at some of the collieries visited were higher, a colliery in Belgium allowing 7·7 gallons, while one in the Pas de Calais allowed 8·8 gallons. The supply is regulated by an attendant, who stands on a raised platform at one end of the building, and has at hand a series of taps, each tap controlling the supply to perhaps eight or ten of the showers, according to the number attached to each branch pipe.

In Belgium and France each shower is installed in a separate little cabin, in order to insure privacy to the bather during the operation of washing; and, in addition to the main controlling taps, there is a separate tap in each cabin for the use of the bather. In Germany the men wash all together, and it is not unusual to see one man helping another by scrubbing his back. The orderly, quick, and rapid way in which a large shift of some hundreds of men got through the business of bathing is very remarkable. At some of the German collieries the boys are housed in a separate part of the building, but there are not separate cabins for each bather, and the water-supply is controlled entirely by the attendant. As eight and ten of the showers are controlled by one tap, they must all be left not running, or all stopped together, and this probably tends to a greater consumption of water than would be the case if each shower were separately controlled. The authors were informed that an average daily consumption of water at bathing-establishments in Westphalia, including the officials' baths and the water used in cleaning up the place, was 33 gallons per man.

Water-heating.—The water-heating apparatus is placed near the controlling taps at one end of the building, so that one attendant can manage everything The water is generally heated by exhaust-steam from the colliery engines, though in some cases live steam is employed. For mixing the steam and water together injectors are sometimes employed, and in some instances this is effected by bringing together the steam and water in an old boiler or other similar receptacle, in the same way as boiler-feed water is often heated. The heated water is cooled down to the desired temperature, usually 98° to 100° Fahr., by an admixture of cold water from a separate tap.

Storing and drying Clothes.—The ordinary method of storing and drying the clothes is by suspending them in separate bundles from hooks fixed in the upper part of the building, where they are exposed to the drying effect of the heated air. For this purpose the building must be spacious and lofty; the side walls are usually 20 ft. to 30 ft. in height, the roof sloping upwards from them to a central ventilator running the whole length of the building. In cold weather they are heated artificially by steam-radiators to a temperature of about 70° Fahr.

Different forms of suspenders are in use, the most common consisting of three or four hooks projecting radially from a central vertical stem (Fig. 1), while another is in the form of a stirrup opening in the centre (Fig. 2). In Westphalia a little metal dish to hold a piece of soap is added, usually fixed above the hooks (Fig. 3). Each man provides his own soap and towel. Where there are separate bathing-cabins, as in Belgium, the soap-dish is placed in the cabin. To each

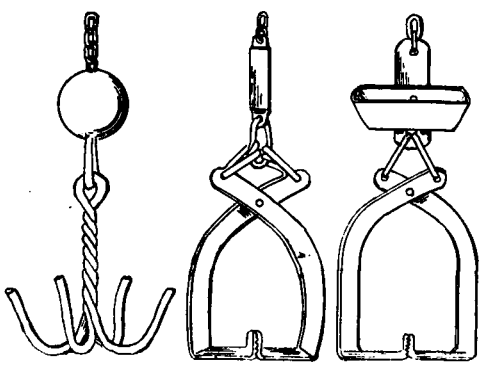

Fig. 1.—Ordinary Form. Fig. 2.—Stirrup Form. Fig. 3.—Stirrup with Soap-dish attached.

FORMS OF SUSPENDERS.

suspender is attached a metal plate bearing a number, and every man using the bathing-establishment appropriates one of them, and thus knows his suspender by its number. As many suspenders as there are men to bathe are provided. Each suspender is hung at the end of a cord or chain or wire. A small-linked chain, about ¼ in. across, which runs easily round small pulleys, appears to stand the test of experience best.

At the level of the top of the walls of the building there are fixed a series of light steel-joists, 3 in. or 4 in. wide, horizontally spaced at intervals of about 1 ft 4 in. apart, and carrying small